

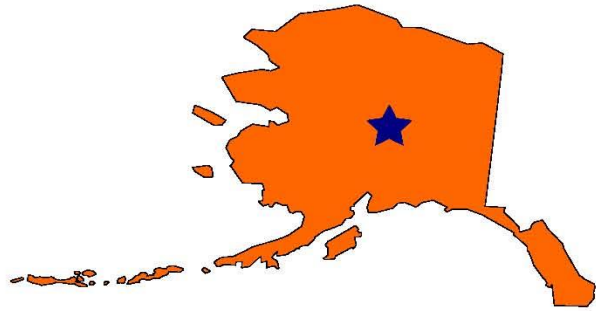
THE FRACFOCUS 2.0 SYSTEM

Focus on Disclosure

Railroad Commission of Texas

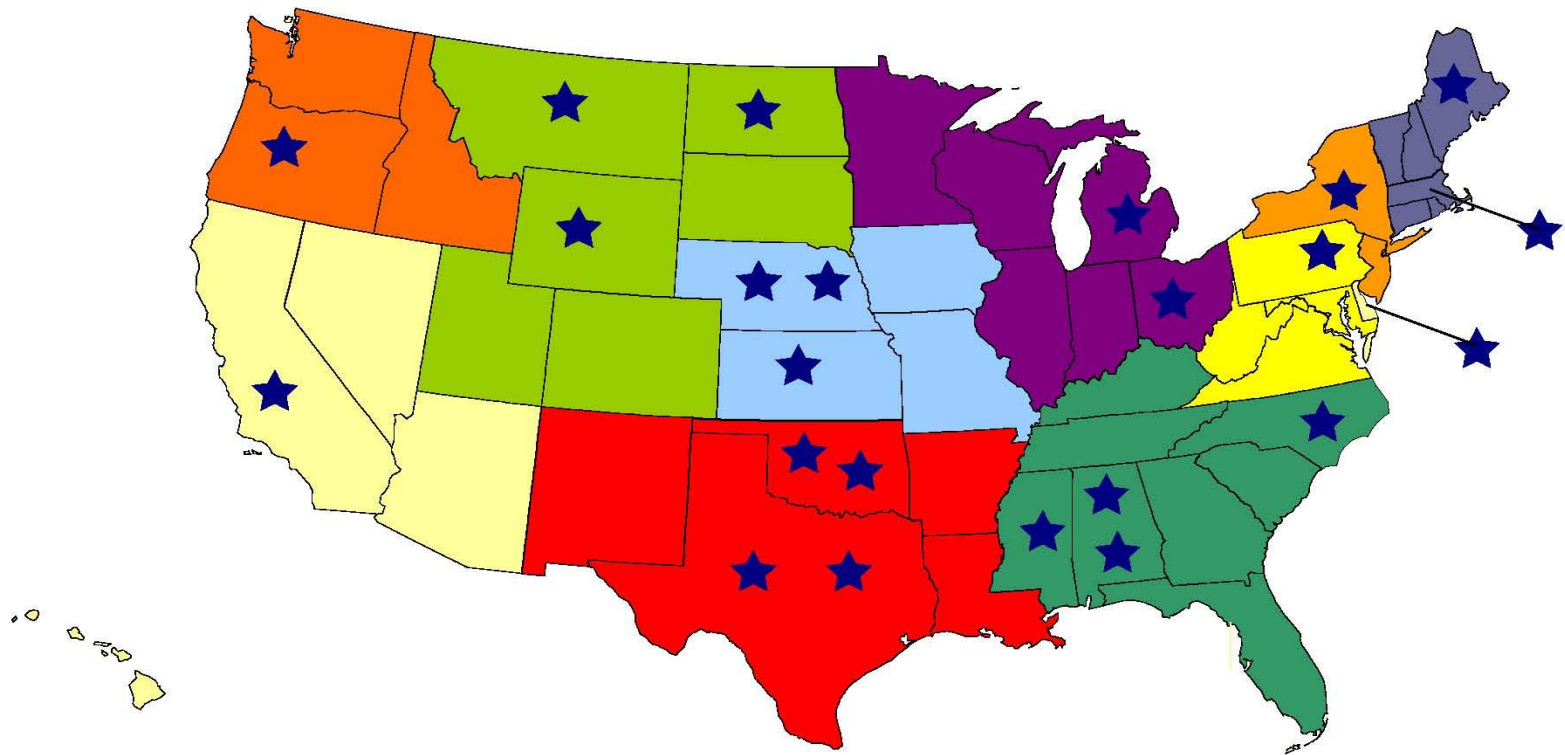
Leslie Savage, Ground Water Protection Council

What is the Ground Water Protection Council?



- Association of state groundwater and underground injection control agencies

- Governed by a board of state officials from each of the 10 EPA Regions



Background on FracFocus

- With the rapid growth of shale gas development using high-volume hydraulic fracturing technologies, the media and public became aware of the fracturing process
 - The industry showed reluctance to disclose information about the chemicals used
 - This led to great concern over the types and quantities of chemical additives used in frac fluids
- In April 2011, the Ground Water Protection Council (GWPC) and the Interstate Oil and Gas Compact Commission (IOGCC) opened a new online system (FracFocus) to host information about the chemical additives used in frac fluids and their ingredients
- FracFocus was designed to provide the public with information about the process of hydraulic fracturing and individual landowners with information about chemicals being used on or near their property



Background (2)

- Initially, chemical data entry into the Registry by the oil and gas companies was voluntary, but over the next year, several states adopted regulations requiring data on the chemicals used in frac fluids to be disclosed
 - Many of those states specifically referenced FracFocus as the mechanism for submitting those data
- The number of wells for which chemical information was entered grew quickly
 - At the end of 2012, data had been entered on more than 34,000 wells, representing 342 companies



-
- **Two sides to FracFocus**
 - Public side
 - General fracturing information
 - Disclosure presentation
 - Company side
 - FracFocus 2.0 disclosure submission system



General Fracturing Information

WELCOME

Welcome to FracFocus, the hydraulic fracturing chemical registry website. This website is a joint project of the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission.

On this site you can search for information about the chemicals used in the hydraulic fracturing of oil and gas wells. You will also find educational materials designed to help you put this information in perspective.

[LEARN MORE >](#)[Welcome](#)[Hydraulic Fracturing](#)[Casing & Cement](#)[State Regulations](#)[Chemical Use](#)

Looking for information about a
well site near you?



Search for nearby well sites that have been hydraulically fractured to see what chemicals were used in the process.

FAQs

[1 / 3](#)

Q. How much water is used in hydraulic fracturing?

A. This varies from well to well and depends upon the well configuration (vertical or horizontal), the number of stages fractured, and the specific characteristics of the formation being fractured. In vertical wells with a single fractured stage it is not uncommon to use less than 50,000 gallons of water during a fracture job, while a multi interval fracture job in a horizontal well can use several million gallons of water. [Read more...](#)

[All FAQs »](#)

Is groundwater
protected?



Groundwater Protection: Priority Number One

Oil and natural gas producers have stringent requirements for how wells must be completed. The genesis of these requirements is water safety.

Casing is the first line of defense used to protect freshwater aquifers.

[More About Groundwater Protection »](#)

Disclosure Presentation

Find a Well

Map Search Standard Search

SEARCH OPTIONS



STATE:

Choose a State



COUNTY:

Choose a State First



WELLS IN COUNTY:

Choose a County First



OPERATOR:

Choose One



API WELL NUMBER:

— — —

WELL NAME:

— — —

FIND CAS NUMBER

BUILD DATE FILTER

INGREDIENT LIST

SEARCH

RESET

(Note: One search option is required to do a search.)













In states where disclosure using FracFocus is not a state requirement, well site information is voluntarily provided by participating oil and natural gas operators. The FracFocus system is designed to contain disclosures for wells fractured after January 1, 2011. See the full list of [participating production companies](#). Only disclosures that match your search parameters are presented. There may be more than one disclosure presented for a single well. NOTE: To maximize search efficiency, the total number of disclosures returned from a single search may not exceed 2000.

Find a Well

[← Back To Search](#)

[Next Page](#)

Page of 25 [Go](#)

	API No.	Job Date	State	County	Operator	WellName	Well Type	Latitude	Longitude	Datum
	05-001-09723	1/8/2011	Colorado	Adams	Anadarko Petroleum Corp...	TALON VIEW 3-9	Gas	39.982340	-104.898600	NAD83
	05-001-09724	1/8/2011	Colorado	Adams	Anadarko Petroleum Corp...	TALON VIEW 5-9	Gas	39.982383	-104.898600	NAD83
	05-001-09721	1/8/2011	Colorado	Adams	Anadarko Petroleum Corp...	TALON VIEW 6-9	Gas	39.982252	-104.898599	NAD83
	05-001-09719	1/14/2011	Colorado	Adams	Anadarko Petroleum Corp...	TALON VIEW 11-9	Gas	39.982210	-104.898599	NAD83
	05-001-09722	1/17/2011	Colorado	Adams	Anadarko Petroleum Corp...	TALON VIEW 12-9	Gas	39.982169	-104.898599	NAD83
	05-001-09725	1/11/2011	Colorado	Adams	Anadarko Petroleum Corp...	TALON VIEW 21-9	Gas	39.982295	-104.898600	NAD83
	05-001-09720	1/20/2011	Colorado	Adams	Anadarko Petroleum Corp...	TALON VIEW 22-9	Gas	39.982129	-104.898598	NAD83
	05-001-08991	4/25/2011	Colorado	Adams	Anadarko Petroleum Corp...	YORK NORTH 13-12 #3	Gas	39.977350	-104.957217	NAD83
	05-001-09111	4/20/2011	Colorado	Adams	Anadarko Petroleum Corp...	DREYER #1	Gas	39.989650	-104.684286	NAD83
	05-069-06420	1/29/2011	Colorado	Larimer	Anadarko Petroleum Corp...	ENCORE 4-12	Gas	40.420216	-104.954907	NAD83
	05-069-06423	1/29/2011	Colorado	Larimer	Anadarko Petroleum Corp...	ENCORE 18-12	Gas	40.420161	-104.954909	NAD83
	05-069-06407	1/25/2011	Colorado	Larimer	Anadarko Petroleum Corp...	MIRACLE 10-12	Gas	40.413925	-104.953288	NAD83

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration In Additive (% by mass)**	Maximum Ingredient Concentration In HF Fluid (% by mass)**	Comments
Water	Operator	Carrier	Water	7732-18-5	100.00%	83.89391%	
Frac-Gide 1000	Baker Hughes	Biocide	2,2-Dibromo-3-Nitriopropionamide	10223-01-2	100.00%	0.00777%	
			Water	7732-18-5	5.00%	0.00039%	
Alpha 452	Baker Hughes	Biocide	Tetrakis(hydroxymethyl) Phosphonium Sulfate	55566-30-8	40.00%	0.01006%	
Enzyme G-1	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00108%	
			Water	7732-18-5	97.00%	0.03500%	
GBW-23L	Baker Hughes	Breaker	Magnesium Hydroxide	1309-42-8	5.00%	0.00188%	
			Magnesium Oxide	1309-48-4	2.00%	0.00075%	
			Magnesium Peroxide	14452-57-4	3.00%	0.00113%	
			White Mineral Oil	8042-47-5	91.00%	0.03419%	
BIF-5L, 55 gal drum	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60.00%	0.03639%	
			Potassium Hydroxide	1310-58-3	30.00%	0.01820%	
XLW-30A3, tote	Baker Hughes	Crosslinker	Hydrotreated Light Distillate	64742-47-6	70.00%	0.04464%	
XLW-32	Baker Hughes	Crosslinker	Boric Oxide	1303-86-2	20.00%	0.00191%	
			Methanol	67-56-1	90.00%	0.00860%	
GW-3LDF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	40.00%	0.21627%	
			Petroleum Distillate Blend	CBI	70.00%	0.37848%	
NE-900, tote	Baker Hughes	Non-emulsifier	Methanol	67-56-1	30.00%	0.01205%	
			Nonyl Phenyl Polyethylene Glycol Ether	9016-45-9	10.00%	0.00402%	
Sand, White, 40/70	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	4.70068%	
Mg Light, 20/40	Baker Hughes	Proppant	Magnesium Iron Silicate	1317-73-1	10.00%	0.95537%	
			Magnesium Silicate	1343-88-0	60.00%	5.73223%	
			Silicon Dioxide (Amorphous As Glass)	7631-86-9	40.00%	3.82149%	
ScaleSorb 3, (25# pall)	Baker Hughes	Scale Inhibitor	Amino Tri (Methylene Phosphonic Acid)	6419-19-8	30.00%	0.00583%	
			Calcined Diatomaceous Earth	91053-39-3	100.00%	0.01943%	
			Crystalline Silica Quartz	14808-60-7	1.00%	0.00019%	
			Phosphonic Acid	13596-36-2	1.00%	0.00019%	
InFlo 250W	Baker Hughes	Surfactant	2-Butoxyethanol	111-76-2	20.00%	0.00850%	
			Methanol	67-56-1	30.00%	0.01335%	
			Surfactants	CBI	80.00%	0.03560%	
Additional Components							
			Alkyl Benzenesulfonic Acid	68584-25-5			
			Boric Anhydride	1303-86-2			
			Copolymer	CBI			
			Crystalline Silica	14808-60-7			
			Ethylene Glycol Monobutyl Ether	111-76-2			
			Hydrotreated Light Distillate	64742-47-6			
			Methanol	67-56-1			
			Modified Amide	68442-77-3			
			Poly (oxy-1,2-ethanedyl)	24938-91-6			
			Propylene Carbonate	108-32-7			
			Quaternary Ammonium Compounds bis(hydrogenated Tallow Alkyl)	68953-58-2			
			Dimethyl Salts With Bentonite				
			Sodium Sulfate	7757-82-6			
			Sodium mon/Di dodecyl Disulfonated Diphenyl Oxide	119345-04-9			
			Sodium tetraborate	1330-43-4			
			Water	7732-18-5			

Classic
FracFocus
Template,
MSDS Ing.

Non-
MSDS
Ingredient

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/2/2012
Job End Date:	12/8/2012
State:	Colorado
County:	Weld
API Number:	05-123-39999-99-99
Operator Name:	VE Producer
Well Name and Number:	Test Well #2 - combined format
Longitude:	-104.76057200
Latitude:	40.19021000
Datum:	WGS84
Federal Well:	NO
Total Base Water Volume (gal):	434,867
Total Base Non Water Volume:	



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water/sand/BA-1/Biocide 1/GA-1	VE Chemicals	carrier/proppant/buffering agent/biocide/gelling agent					
			water	7732-18-5	100.00	87.00000	
			crystalline silica	014808-60-7	100.00	11.00000	
			potassium carbonate	584-08-7	60.00	1.70000	
			Alkyl(C12-16) dimethylbenzylammonium chloride	68424-85-1	7.00	0.02200	
			ethanol	64-17-5	5.00	0.01100	

What About Trade Secrets?

- **FracFocus neutral on the subject of Trade Secrets**
- Trade secret laws and regulations vary by state
 - Technical
 - Administrative
 - Legal



Why FracFocus 2.0?

- The original FracFocus (FracFocus 1.0) was developed to fill an important gap in public disclosure information
 - The programming and system design were done in a way that allowed FracFocus 1.0 to get underway quickly in early 2011
- As the volume of information entered into the system grew, industry, GWPC, and IOGCC realized that a more efficient data management system was needed
 - This led to the development of FracFocus 2.0 during 2012



FracFocus 2.0 Upgrades

- **Server vs. client side processing**
- **New xml submission format to assist with data validation checks (dates, locations, volumes etc...)**
- **Data entry forms for operators to create xml**
- **Expanded search capability**
 - Dates
 - Chemical names
 - CAS numbers
- **Added user categories**
 - Registered agents
 - Service companies
 - State agencies



Transition Process from FracFocus 1.0 to 2.0

- FracFocus 2.0 was introduced as a beta (test) version in October 2012
- As of November 1, 2012, FracFocus 2.0 became live and functional
- As of June 1, 2013 the FracFocus 1.0 disclosure entry system using Excel files was turned off and XML became the exclusive reporting method for Fracfocus.

The FracFocus 2.0 Disclosure Submission System

Hydraulic Fracturing
DISCLOSURE



[FIND A WELL](#)
[BY STATE](#)

[ABOUT PROJECT](#)
[PARTNERS](#)

(Note: Clicking the FracFocus, FIND A WELL links will open a new window.)

Dashboard



Add & Manage
Supervisors



Add & Manage Data
Submitters



Add & Manage
Service Companies



Add & Manage
Agents



Operator Defaults



Download the
Excel Template



Upload Chemical
Disclosure
in Excel Format



Upload Disclosures
in XML Format



Disclosure Lists



Add New Disclosure



3rd Party
Chemicals



Download Chemical
Disclosures



Edit Account

USER MENU

- [Manage Logins](#)
- [Company Stats](#)
- [2.0 User Guide](#)
- [2.0 Training Slides](#)
- [Dashboard](#)
- [Disclosure Upload](#)
- [Disclosure Template](#)

Three ways to generate FracFocus 2.0 files

- Service company creates xml and sends to operator via e-mail
- Service company creates xml and uploads directly to operator queue
- Operator or registered agent creates xml using pre-loaded forms



Add New Disclosure



- Clicking on this icon leads to a screen that allows the user to create a new disclosure report
- Use of this screen is described later in the presentation

Begin New Disclosure

Job Start Date	Job End Date	API Number	State & County
<input type="text"/>	<input type="text"/>	<input type="text"/>	

Well Name

Longitude	Latitude	Datum	Federal Well?
<input type="text"/>	<input type="text"/>	WGS84 <input type="text"/>	<input type="checkbox"/>

True Vertical Depth (ft)	Total Water Vol (gal)	Total Non Water Vol	Total Mass (lbs)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Entering a New Additive

- If you wanted to enter a completely new additive, you would click the New Additive button near the top of the screen
 - The example shows special sand
- Click on the Save button, then fill in information on the next screen

New Additive Information

Trade Name:

Supplier:

Purpose:

3rd Party Chemicals

List of Additives -

	Trade Name	Supplier	Purpose
<input type="button" value="Edit"/> <input type="button" value="Delete"/>	Special sand	VE Chemicals	proppant

	Ingredient Name	CAS Number	Percent High Additive	MSDS	Ingredient Comments
<input type="button" value="Edit"/> <input type="button" value="Delete"/>	Silicon dioxide	014808-60-7	100	<input type="checkbox"/>	
<input type="button" value="Add"/>				<input type="checkbox"/>	

<input type="button" value="Edit"/> <input type="button" value="Delete"/>	water	VE Chemicals	carrier
------------------------------------------------------------------------------	-------	--------------	---------

	Ingredient Name	CAS Number	Percent High Additive	MSDS	Ingredient Comments
<input type="button" value="Edit"/> <input type="button" value="Delete"/>	water	7732-18-5	100	<input type="checkbox"/>	
<input type="button" value="Add"/>				<input type="checkbox"/>	

Choose an Additive from the 3rd Party Chemical List

- Click on the Select Additive box
- Choose a new additive from the drop down list
 - In this case select breaker, then click on the Add Additive box

Select Additive

Select Additive

- crosslinker
- activator
- biocide
- non-ionic surfactant
- friction reducer
- Crosslinker
- proppant
- gelling agent
- breaker
- carrier
- activator
- proppant
- buffer
- breaker

MSDS Chemical Ingredients

New Additive

Select Additive

Add Additive

	Trade Name	Supplier	Purpose	Ingredients	CAS #	% High Additive	% HF Job	Comments	Ingredient Mass
<input type="button" value="Edit"/>	water	VE Chemicals	carrier	water	7732-18-5	100%	87%		0
<input type="button" value="Edit"/>	Sand premium white	VE Chemicals	proppant	Crystalline silica	014808-60-7	100%	11%		0
<input type="button" value="Edit"/>	BA-1	VE Chemicals	buffer	potassium carbonate	584-08-7	60%	1.7%		0
<input type="button" value="Edit"/>	Biocide 1	VE Chemicals	biocide	Alkyl (C12-16) dimethylbenzylammonium chloride	68424-85-1	7%	.022%		0
				ethanol	64-17-5	5%	.011%		0
				Didecyl dimethyl ammonium chloride	7173-51-5	10%	.0004%		0
				gluteraldehyde	111-30-8	30%	.0003%		0

Reviewing, Editing and Approving Disclosure Reports by Operators

- The next set of slides shows how operators work with disclosure reports already in the operators queue
- Start with the Disclosure Lists icon and choose a record

Disclosure Lists - [New Disclosure](#)

Pending (3) Submitted (2) Amending (0) All (5)

	Company	API Number	Well Name	Job Start Date	Job End Date	TVD	Water Use	Date Mod
Edit Delete	VE Producer	42-127-34700-00-00	CMWW A 104H	6/7/2012	6/7/2012	7,400	2,838,827	12/7/2012
Edit Delete	VE Producer	25-025-02000-00-02	ReCalc Based on Ingredient Mass	10/1/2012	10/4/2012	8,345	8,123,456	12/7/2012
Edit Delete	VE Producer	19-009-99999-00-00	Schema 2-Test	11/26/2012	11/26/2012	5,429	2,858,265	12/12/201

Errors and Warning During Validation

- Sometimes after clicking on the Validate Disclosure button, the resulting screen indicates some irregularities in the entered information
 - Errors – will block validation
 - Warnings – will allow validation to continue

Prepare Disclosure for FracFocus Submission

 Validation Failed. Review issues below.

[Preview Disclosure PDF](#) [Validate Disclosure](#) [Submit To FracFocus](#)

- [Error] Supplier must not be empty for Purpose : **Proppant**
- [Warning] Sum of %HFJob of Ingredients is not within 3% of 100%
- [Warning] CASNumber has an invalid format. for Ingredient : **Aliphatic Alcohols 1** in Purpose : **Corrosion Inhibitor**
- [Warning] CASNumber has an invalid format. for Ingredient : **Other Chemical 1** in Purpose : **Other Purpose**
- [Warning] CASNumber does not pass Digit Verification. for Ingredient : **Other 2** in Purpose : **Other Purpose**
- [Warning] CASNumber does not pass Digit Verification. for Ingredient : **Other 3** in Purpose : **Other Purpose**

New Features Coming to FracFocus in 2015

- **Improvements to accuracy of well data disclosed**
- **Establishment of a policy for data custody, management, security, and retention**
- **State validation of compliance**
- **Upgrades to website to be a more usable and interactive database**

New Features Coming to FracFocus in 2015

- **Improvements to the accuracy of well data disclosed on FracFocus**
 - 6 step validation process to improve data quality and accuracy

Data quality – step 1

CAS number validation

Require valid CAS# Format

Additive Ingredients

	CAS #	Ingredient	% High Additive	% HF Job	Comments	Mass	Sum WTR	Water Density
CAS Number ▼	xzypdq							

Error: Invalid CAS#

Data quality – step 2

Hydraulic Fracturing Data

Edit

Entry Method

☒ MSDS+ ☐ System Approach

Job Start Date 1/1/2015 Job End Date 1/1/2015 API Number 42-173-36757-00-00 State & County Texas --- Glas

Well Name
Test Well 2

Longitude -101.274153 Latitude 32.083928

True Vertical Depth (ft) 1000 Total Water Vol (gal) 100000

MSDS Chemical Ingredients

New Additive

Select Additive ▼

Add

Trade Name	Supplier
------------	----------

Edit EZ Flow 123 Operator

Non-MSDS Additive/

Additive Purpose

Trade Name

Supplier

Additive Ingredients

CAS Number ▼

7647

Save This Additive

Close

CAS Number Common Names Used

7647-01-0

- CA Index Name Hydrochloric acid
- 12 Hydrochloric Acid AR 36%
- Anhydrous hydrochloric acid
- Anhydrous hydrogen chloride
- Hydrochloric acid gas
- Hydrochloric acid, anhydrous
- Other

7647-14-5

- CA Index Name sodium chloride
- 1% NaCl Water
- 3% NaCl Water
- 3% Salt Water
- 4% KCL Water
- 4% NaCl Water
- 4% Salt Water
- 7% KCL Water
- Brine (KCL)
- Brine (NaCl)
- Brine Water

Remove Additive

% HF Job	Comments	Mass	Sum WTR	Wat Den
----------	----------	------	---------	---------

Non-MSDS Chemical Ingredients

New Ingredients

New Ingredients

Trade Name	Supplier	Purpose	CAS #	Ingredients	% High Additive	% HF Job	Comments	Ingredient Mass
------------	----------	---------	-------	-------------	-----------------	----------	----------	-----------------

Data quality – step 3

Trade Secret, Proprietary, CBI

- Drop down boxes ensure digital data is submitted
- Contact information is required for any ingredient marked as Trade Secret, Proprietary , CBI ...

Additive Ingredients

	CAS #	Ingredient	% High Additive	% HF Job	Comments	Mass	Sum WTR	Water Density	
Trade Secret ▼	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Contact information for Entity Asserting a Trade Secret Claim

Company:

First Name: Last Name:

Email: Phone:

Data quality: step 4 water volume

Improve the quality of base water volume reporting by issuing a warning if Total Water Volume (gal) exceeds 15 million gallons.

🔴 [Warning] Total Base Water Volume exceeds 15 million gallons, confirm the number of gallons

Data quality- step 5 maximum ingredient concentration in HF fluid

-If the sum of ingredient concentration in HF fluid is not within 3% of a 100% a warning is issued.

Data quality - step 6

- Multiple disclosures with same API number & job start/end date
- Changing the current error to a warning error when attempting to submit multiple disclosures with the same API number and job date.
- This is only a warning because it is possible to submit multiple disclosures with the same API number and start/end date

🔴 [Warning] A disclosure has already been submitted for this API number and job start date and/or job end date

Reducing trade secret claims: The systems approach

FracFocus Systems Approach Submission

Entry Method: ☐ FracFocus 2.0 ☒ Systems Approach [Disclosure Lists](#) | [Dashboard](#)

Note: This window expires with 10 minutes of inactivity. After that you will be taken back to the dashboard.

[Preview Disclosure PDF](#) [Validate Disclosure](#) [Submit To FracFocus](#)

Hydraulic Fracturing Data [Edit](#)

Job Start Date
9/1/2014

Job End Date
9/1/2014

API Number
04-030-54070-00-00

State & County
California --- Kern - 30

Well Name
Systems Approach Mockup

Longitude
-118.8596804

Latitude
35.4937274

Datum
WGS84


Federal/Tribal Well?
☐

True Vertical Depth (ft)
100

Total Water Vol (gal)
100

Total Non Water Vol
100

Total Mass (lbs)
100



Trade Names [Select Trade Name](#) [New Trade Name](#)

	Trade Name	Supplier	Purpose	Comments
Edit	SandWedge WF	Halliburton	Conductivity Enhancer	Testing
Edit	OptiKleen-WF	Halliburton	Surfactant	Testing
Edit	ER-25	Halliburton	Gelling Agent	Testing
Edit	FR-66	Halliburton	Crosslinker	Testing

Chemical Ingredients [New Ingredient](#)

	Ingredient	CAS #	% High Additive	% HF Job	Ingredient Mass	Comments
Edit	Water	7732-18-5	100	76.52585		Testing
Edit	Crystalline Silica	14808-60-7		22.47965		Testing
Edit	Guar Gum	9000-30-0		0.29059		Testing
Edit	Monoethanolamine	141-43-5		0.13448		Testing
Edit	Magnesium Nitrate	10377-60-3		0.00032		Testing
Edit	Phosphonic Acid	13598-36-2		0.00007		Testing
Edit	Sodium Tetraborate	1303-96-4		0.00895		Testing
Edit	Citric Acid	77-92-9		0.02721		Testing

Establishment of a policy for data custody, management, security, and retention

- FracFocus is being updated to comply with current versions of software
- Penetration testing has been preformed and an extra layer of security has been installed to prevent malicious internet attacks
- Google analytics has been added to help manage the web site and internet traffic

FracFocus amended and original record retention policy

- All records, originals and amended, are permanently stored in the FracFocus database
- FracFocus has instituted an redundant backup system to ensure that all records are retained
- All current records from June 1, 2013 will be available in digital format for download from FracFocus by May 2015
- For data submitted to FracFocus prior to June 1, 2013, header data is available in digital format and chemical disclosure records are available in PDF format

Record retention and amendments

Require Operators to complete a text field explaining the reason for amending record

The screenshot shows a web application interface for preparing a disclosure. A modal dialog box titled "Reason for Amending" is open in the center. The dialog has a red warning icon in the top right corner and contains the text "This is Required for Amending" in red. Below the text is a large, empty rectangular text input field. At the bottom of the dialog is an "OK" button. The background page is titled "Prepare Disclosure for FracFocus" and includes a validation message: "Validation Passed with warnings." and a note: "Note: This window expires with 10 minutes of inactivity. After the..." Below this are buttons for "Preview Disclosure PDF" and "Validate Disclosure". The "Hydraulic Fracturing Data" section is visible, featuring an "Edit" button and a table with the following data:

Job Start Date	Job End Date	API Number
1/18/2014	2/1/2014	03-045-102

Below the table, the "Well Name" is listed as "Diesel CAS # Test Update". At the bottom, another table shows "Longitude", "Latitude", and "Datum" values:

Longitude	Latitude	Datum
-92.294396	35.248903	NAD27

New online search capability

- New features allow searches by
 - Date HF job preformed
 - Date chemical disclosure submitted
 - Google style chemical search capability

The screenshot displays a web browser window with the URL `beta.fracfocus.org/DisclosureSearch/StandardSearch.aspx`. The page is titled "Find a Well" and features a "SEARCH OPTIONS" section. This section includes dropdown menus for "STATE:", "COUNTY:", and "OPERATOR:", each with a "Select" option. Below these are fields for "JOB/SUBMITTED DATE:", "RANGE START DATE:", and "RANGE END DATE:". The "JOB/SUBMITTED DATE:" field is set to "Hydraulic Fracturing" and "Between". There are also input fields for "API WELL NUMBER:", "WELL NAME:", and "CAS NUMBER:". At the bottom, there is an "INGREDIENTS:" field with a dropdown menu. The dropdown menu is open, showing a list of chemical ingredients including "Fatty acids, coco, reaction products with ethanolamine, ethoxylated", "12 Hydrochloric Acid AR 36%", "15% HCl Acid", "1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-5-oxo-1-(4-sulfofenyl)-4-[(4-sulfofenyl)azo]-, trisodium salt", and "1-Propanesulfonic acid 2-methyl-2-[(1-oxo-2-propenyl)amino]monosodium salt, polymer 2-propenamide".

Search Features Under Development

Additional search criteria

1. Ingredient: purpose, supplier, trade name...
2. Advanced GIS and/or map based searches



- **FracFocus Inquiries:**

Mike Nickolaus, P.G.

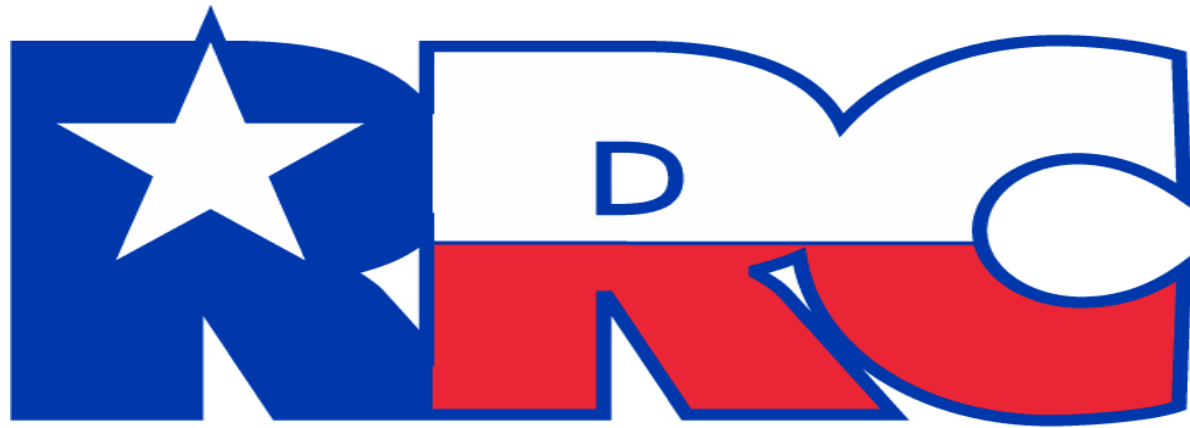
mnickolaus@fracfocus.org

Brian Hampton, IT Manager

bhampton@gwpc.org

405-516-4972





RAILROAD COMMISSION OF TEXAS

Statewide Rule 29 – Chemical Disclosure

Leslie Savage

SWR 29 – HF Chemical Disclosure



- Definitions**
- Applicability**
- Required disclosures**
- Disclosures not required**
- Trade Secret protection**
- Trade Secret challenge**
- Trade Secret confidentiality**
- Penalties**

SWR 29 – HF Chemical Disclosure



- **DEFINITIONS (cont'd)**

- Hydraulic fracturing treatment--The treatment of a well by the application of HF fluid under pressure for the express purpose of initiating or propagating fractures in a target geologic formation to enhance production of oil and/or natural gas.
- Hydraulic fracturing fluid--The fluid, including the applicable base fluid and all additives, used to perform a particular HF treatment.
- Base fluid - The continuous phase fluid type, such as water, used in a particular HF treatment.
- Additive--Any chemical substance or combination of substances, including a proppant, contained in a HF fluid that is intentionally added to a base fluid for a specific purpose whether or not the purpose of any such substance or combination of substances is to create fractures in a formation.

SWR 29 – HF Chemical Disclosure



- **DEFINITIONS (cont'd)**

- Chemical ingredient--A discrete chemical constituent with its own specific name or identity, such as a CAS number, that is contained in an additive.
- Chemical family--A group of chemical ingredients that share similar chemical properties and have a common general name.
- Total water volume-- The total amount of water in gallons used as the carrier fluid for the HF job. It may include recycled water and newly acquired water.
- Chemical Disclosure Registry--The chemical registry website known as FracFocus developed by GWPC/IOGCC.

SWR 29 – HF Chemical Disclosure



- **DEFINITIONS (cont'd)**

- Trade secret--Any formula, pattern, device, or compilation of information that is used in a person's business, and that gives the person an opportunity to obtain an advantage over competitors who do not know or use it. The six factors considered in determining whether information qualifies as a trade secret, in accordance with the definition of "trade secret" in the Restatement of Torts, Comment B to Section 757 (1939), as adopted by the Texas Supreme Court in *Hyde Corp. v. Huffines*, 314 S.W.2d 763, 776 (Tex. 1958), include:
 - (1) the extent to which the information is known outside of the company;
 - (2) the extent to which it is known by employees and others involved in the company's business;
 - (3) the extent of measures taken by the company to guard the secrecy of the information;
 - (4) the value of the information to the company and its competitors;
 - (5) the amount of effort or money expended by the company in developing the information; and
 - (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.

SWR 29 – HF Chemical Disclosure



- **APPLICABILITY**

- HF treatment performed on a well for which RRC issued the initial drilling permit on or after February 1, 2012.

SWR 29 – HF Chemical Disclosure



REQUIRED DISCLOSURES

- Supplier and service company
 - Service company
 - Operator
- Operator
 - Commission
 - Health professionals and emergency responders
- Chemical disclosure to RRC
 - Chemical Disclosure Registry (FracFocus)
 - Supplemental list of other chemical ingredients

SWR 29 – HF Chemical Disclosure



REQUIRED DISCLOSURES – Supplier/Service company

As soon as possible, but not later than 15 days following the completion of HFT(s):

Must provide to operator following information concerning each chemical ingredient intentionally added to HF fluid:

- each additive, the trade name, supplier, and a brief description of the intended use or function;
- each chemical ingredient subject to the requirements of 29 CFR §1910.1200(g)(2) (MSDS);
- all other chemical ingredients intentionally included in, and used for the purpose of creating, HFT(s);
- the actual or maximum concentration of each MSDS chemical ingredient in percent by mass; and
- the CAS number for each chemical ingredient, if applicable.
- written statement if the specific identity and/or CAS number or amount of any additive or chemical ingredient used in HFT(s) is claimed to be entitled to protection as trade secret information. Claimant must provide:
 - supplier's or service company's contact info, including the name, authorized representative, mailing address, and phone #; and
 - chemical family, unless providing the chemical family would disclose info protected as a trade secret.

SWR 29 – HF Chemical Disclosure



REQUIRED DISCLOSURES - Operator

On or before the date the well completion report is submitted to RRC, operator must upload information to the FracFocus registry, including:

- operator name;
- date of completion of the HFT(s);
- the county, API number, well name and number;
- the longitude and latitude of the wellhead;
- the total vertical depth of the well;
- the total volume of water used or the type and total volume of the base fluid used in the HFT(s), if something other than water;

SWR 29 – HF Chemical Disclosure



REQUIRED DISCLOSURES – Operator (Cont'd)

- each additive and the trade name, supplier, and a brief description of intended use/function of each additive;
- each chemical ingredient subject to 29 CFR §1910.1200(g)(2) (MSDS), as provided by the chemical supplier or service company or by the operator, if the operator provides its own chemical ingredients;
- the actual or maximum concentration of each MSDS chemical ingredient in % by mass;
- the CASRNs for each chemical ingredient listed, if applicable; and
- a supplemental list of all remaining chemicals (non-MSDS) and their respective CASRNs, that were intentionally included in and used for the purpose of creating the HFT(s).

SWR 29 – HF Chemical Disclosure



- **INACCURACIES IN INFORMATION**

- Supplier not responsible for any inaccuracy in information provided by a third party manufacturer of the additives.
- Service company not responsible for any inaccuracy in information by the supplier.
- Operator not responsible for any inaccuracy in information provided by the supplier or service company.

SWR 29 – HF Chemical Disclosure



- **Disclosure to Health Professionals/Emergency Responders**

- May not withhold information related to chemical ingredients used in a HFT, including Trade Secrets, if needed for diagnostic, treatment or other emergency response purposes.
- Must provide directly to health professional or emergency responder, all information in the person's possession, whether or not the information is a trade secret.
- Must include with the disclosure, as soon as circumstances permit, a statement of the health professional's confidentiality obligation.
- In an emergency situation, must provide the information immediately upon request.

Disclosures must be made in accordance with the procedures in 29 CFR §1910.1200(i) with respect to a written statement of need and confidentiality agreements, as applicable.

SWR 29 – HF Chemical Disclosure



- **DISCLOSURES NOT REQUIRED:**
 - Ingredients not intentionally added
 - Ingredients not disclosed by manufacturer, supplier, service company
 - Ingredients that occur naturally or are otherwise unintentionally present
 - Specific ingredients eligible for trade secret protection

SWR 29 – HF Chemical Disclosure



TRADE SECRET PROTECTION:

Not required to disclose trade secret information, unless OAG or appropriate court determines that the information is not entitled to trade secret protection under Texas Gov. Code, Chapter 552.

SWR 29 – HF Chemical Disclosure



TRADE SECRET PROTECTION:

- If specific ID and/or CASRN of a chemical ingredient, the concentration of a chemical ingredient, or both are claimed or have been finally determined to be entitled to protection as a trade secret, supplier/service company may withhold that information from the information provided to the operator.
- If supplier or service company elects to withhold that information, he/she must provide to the operator, information that:
 - indicates information is entitled to protection as trade secret information; and
 - discloses the chemical family associated with the chemical ingredient; or
 - discloses the properties and effects of the chemical ingredient(s), the identity of which is withheld.

SWR 29 – HF Chemical Disclosure



TRADE SECRET CHALLENGE:

Eligibility to challenge claim of Trade Secret protection

- the landowner on whose property the relevant wellhead is located;
- the landowner who owns real property adjacent to that property; or
- a Texas department or agency with jurisdiction over a matter to which the claimed trade secret information is relevant.

SWR 29 – HF Chemical Disclosure



TRADE SECRET CHALLENGE PROCEDURE:

- Requestor must provide a signed certification in writing to RRC, including information identifying the requestor and the well, and a statement that the requestor is eligible to make a challenge (owns the property or owns adjacent property)
- Must be filed no later than 24 months from date the operator filed the well completion report for the well

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TRADE SECRET CHALLENGE PROCEDURE (Cont'd)

Within 10 business days of receiving an eligible request, RRC must:

- submit to OAG request for decision regarding the challenge;
- notify well operator and owner of the trade secret information of submission of the request to OAG and of requirement that the owner of the claimed trade secret information submit directly to OAG the claimed trade secret information, clearly marked "confidential," submitted under seal; and
- inform the trade secret owner of the opportunity to substantiate to OAG its claim of entitlement of trade secret protection, in accordance with Texas Gov Code, Chapter 552

SWR 29 – HF Chemical Disclosure



TRADE SECRET CHALLENGE PROCEDURE (Cont'd)

- If the OAG determines that the trade secret protection claim is valid, the owner of the claimed trade secret information shall not be required to disclose the trade secret information, subject to appeal.
- Procedure for withdrawal of challenge
- A final determination by the OAG may be appealed within 10 business days to a district court of Travis County pursuant to Texas Government Code, Chapter 552.
- If the OAG, or an appropriate court on appeal, determines that the withheld information would not be entitled to trade secret protection, the owner of the claimed trade secret information must disclose the information to the requestor as directed by the OAG or the court.

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- **PENALTIES**

- A violation of this section may subject a person to any penalty or remedy specified in the Texas Natural Resources Code, Title 3, and any other statutes administered by RRC. The certificate of compliance for any oil, gas, or geothermal resource well may be revoked in the manner provided in §3.73 (Pipeline Connection; Cancellation of Certificate of Compliance; Severance) (Rule 73) for violation of this section.

SWR 29 – HF Chemical Disclosure



- **FracFocus REGISTRATION**

Information regarding registration of your company to use FracFocus.org can be found at: <https://www.hydraulicfracturingdisclosure.org/Account/RegisterOperator.aspx>

NOTE: Registration can be expedited if your company uses the same security administrator listed on the company's Security Administrator Designation Form (RRC SAD Form)

Leslie Savage, P.G.
Assistant Director
Technical Permitting
Oil & Gas Division
Railroad Commission of Texas
Leslie.savage@rrc.state.tx.us
(512)463-7308

Get your facts first, then you can distort them as you please.

Mark Twain